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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,132	02/17/2004	Jac-Seok Jeong	51111/DBP/Y35	3100

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EXAMINER

TRAN, HENRY N

ART UNIT PAPER NUMBER

2629

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,132

Applicant(s)

JEONG, JAE-SEOK

Examiner

Henry N. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 11-13 is/are allowed.
- 6) ☒ Claim(s) 8-10 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Application has been examined. The original claims 1-20 are pending. The examination results are as follows.

Information Disclosure Statement

1. The examiner has considered the documents listed in forms PTO/SB/08 A/B submitted with the Information Disclosure Statements (IDSs) received 3/14/05, 2/28/05 and 2/17/04 (see the attached forms PTO/SB/08 A/B).

Drawings

2. Figures 1, 2, 3, 4A, 4B and 4C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated; and was admitted by the applicant, see line 16 of page 10 through line 3 of page 11 of the specification. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8-10 and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto et al. (U.S. Publication No. 20020097201 A1, hereinafter referred to as "Yamamoto").

Re claim 8, Yamamoto teaches a plasma display panel (PDP) image display method for dividing an image of each frame displayed on a PDP (101) corresponding to an input video signal into a plurality of subfields, combining luminance weights of the subfields, and displaying gray, comprising: determining whether the input video signal is a PAL signal,; if the input video signal is the PAL signal: generating subfield data and address data corresponding to the input video signal; producing a number of sustain pulses based on a load ratio of the input video signal; determining a start point of each subfield; and generating a control signal for a subfield arrangement configuration based on the number of sustain pulses and the start point of each subfield; and applying the generated subfield data, the address data, and the control signal for the subfield arrangement configuration to the PDP, wherein the subfield data include first and second subfield groups, wherein a number of the subfields included in the second subfield group is greater than a number of the subfields included in the first subfield group, and wherein at least one of the subfields, which is used for forming low gray, is included in the second subfield group (Yamamoto, Figs. 1, 9, 12 and 13, shows rear a PAL signal frame including a rear frame and a front frame, which are read on the first and second subfield groups, wherein a number of the subfields included in the front frame, i.e., 6, is greater than a number of the subfields included in the first subfield group, i.e., 4, and wherein at least one of the subfields which is used for

forming low gray, brightness weight 1 or 2, is included in the front frame, see Fig. 13A, paragraphs 56-58 and 61-66).

Re claim 9, Yamamoto teaches all the claimed limitations as noted in claim 8 above; and Yamamoto further teaches that light emission centers between the subfield groups are substantially periodically formed regardless of a variation of the load ratio of the input video signal, see Figs. 12 and 13, and paragraph 67.

Re claim 10, Yamamoto further teaches that the substantially periodical formation of the light emission centers between the subfield groups is realized by making a first time gap between the light emission centers of the first and second subfield groups in a same frame correspond to a second time gap between the light emission centers of the second subfield group and a first subfield group of a next consecutive frame (Yamamoto, Fig. 13A, shows that the next frame wait time and the rest period of the rear frame are provided in a same frame, which makes the first time gap between the light emission centers of the front frame and the rear frame corresponding to a second time gap between the light emission centers of the rear frame and a front frame of a next frame, see paragraph 64.

Re claim 14-20, Yamamoto, Figs. 9 and 12-14, teaches: a method of displaying an image corresponding to an input video signal on a plasma display panel (PDP), using a plurality of subfields that are selectively used to form gray of the image, the method comprising: organizing the subfields into first and second subfield groups (a rear frame and a front frame), each subfield corresponding to a bit that represents one of a plurality of luminance weights, the second subfield group including subfields corresponding to least significant bit (LSB) and LSB+1, respectively (the front frame including subfields corresponding to least significant bit (LSB) and LSB+1, see

Fig. 13A); and forming low gray using the subfields corresponding to the LSB and LSB+1 in the second subfield group (the front frame including subfields corresponding to least significant bit (LSB) and LSB+1, see Fig. 13A); substantially maintaining a periodicity of light emission centers between the subfield groups, wherein substantially maintaining the periodicity comprises varying a start time of the second subfield group according to a load ratio of the input video signal, see Fig. 14; wherein the second subfield group includes a greater number of the subfields than the first subfield group, see Fig. 13A; determining whether the input video signal is a PAL signal, wherein the subfields are organized into the first and second subfield groups if the input video signal is the PAL signal, wherein a first time gap between the first and second subfield groups is substantially the same as a second time gap between the second subfield group of one frame and the first subfield group of a next consecutive frame, see Figs. 12 and 13; and organizing the subfields into a single group if the input video signal is an NTSC signal, which is old and well known in the art, see Fig. 3.

Allowable Subject Matter

5. Claims 1-7 and 11-13 are allowed.

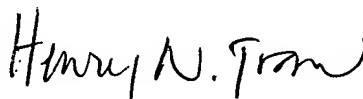
Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are U.S. Patents Nos.: 7,057,584 issued to Jeong (the Inventor), 6,552,701 issued to Tanaka, and 5,818,419 issued to Tajima et al., which teach PDP apparatuses and driving methods for controlling the intensity of gray scale level using fields and subfields techniques.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry N. Tran whose telephone number is 571-272-7760. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H. Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Henry N Tran
Primary Examiner
Art Unit 2629

HT
8/17/06

